

<<水资源工程学>>

图书基本信息

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作者：赵中极，赵晶 编

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## &lt;&lt;水资源工程学&gt;&gt;

## 前言

自我国实行改革开放以来,涉外水事逐渐增多。我国引进了世界银行、亚洲银行贷款,投资水利水电建设;涉外水利水电工程逐渐增加,一些外国承包商承包了我国鲁布革、二滩、弓I大入秦、小浪底、万家寨等水利水电部分工程的施工,三峡等工程的重要水电机械设备制造工作。

与此同时,我国许多水利水电设计、施工单位和机械设备制造厂陆续走出国门,参与国外水利水电工程的建设。

此外,近年来国际大坝组织委员会等的重要会议在我国举行,水利水电方面的学术交流活动则更是频繁。

在这些工作和活动中,英语成为当事方主要的工作、交流语言,因此新的形势要求水利水电建设者、管理者不但要精通水利水电专业知识,而且还要谙熟水利水电专业的英语。

《water Resources Engineering》(水资源工程学)是为高等学校水利水电以及相关专业的学生编写的双语教学教材,也可供我国水利水电工作者提高水利水电专业英语水平学习使用。

本书面向具有中等英语水平的读者,目的是全面、系统地介绍水资源工程专业知识。本书具有适当的专业知识深度,既不是科普读物,也非专门的学术著作。

本书在编写过程中,遵照科学发展观的指导原则,注意体现现代水利水电建设与国家社会和经济

发展、环境生态保护之间的关系。全书重点介绍水资源工程的专业知识,但也顾及工程水文学、力学、水力学、工程地质等专业基础课的一些基本概念。

书中还介绍了国内外若干著名的水利水电工程,当代先进的水利水电科学技术;精选了与内容紧密配合的图片,有助于读者的学习和理解;对于本页中出现的生疏单词、短语和疑难句均采用了页下注的形式作释,以方便读者阅读学习。

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### 内容概要

《水资源工程学》重点介绍了水资源工程的专业知识，同时也顾及了工程水文学、力学、水力学、工程地质等专业基础课的一些基本概念。

书中还介绍了国内外若干著名的水利水电工程，当代先进的水利水电科学技术等。

《水资源工程学》适合高等学校水利专业师生使用，也可以供水利水电工作者提高水利专业英语水平。

书籍目录

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## 章节摘录

Gullies are described as active when their walls are free of vegetation and inactive when they are stabilized by vegetation. Gullies are also classified as small, medium, and large according to depth. With medium-sized gullies measuring 1 to 5 m deep.

Streambank erosion. Removal of soil material from the sides of running streams, streambank erosion, is usually greatest along the outside of bends, but inside meanders may be scoured intensively during severe floods. Streambank erosion affects relatively small areas, but damage is done to very productive soils.

Erosion from construction sites. Civil engineering construction often exposes bare soils subject to severe erosion for several years. During the construction period steep unstable slopes are created that cannot be protected by vegetation. Such construction areas can produce severe sedimentation and pollution of streams and downstream reservoirs.

#### 12.2.4 Erosion damage

There are many ways in which soil and water erosion cause damage.

Soil loss. The most apparent damage caused by water erosion is the removal of soil from eroding surfaces. While erosion from land covered with perennial vegetation, either grass or trees, amounts to only a fraction of a ton per acre annually, erosion from bare, cultivated fields may exceed 200 tons / ac.

Plant nutrient and organic matter losses. Soil erosion includes not only the removal of individual soil particles, but also the loss of organic matter and plant nutrients as well. Plant nutrients may be attached to the particles or removed in a soluble form by water. Since the erosion process causes the finer soil particles and organic matter to be removed, and since such material furnishes most of the exchange capacity of the soil, providing storage for plant food, the removal of these smaller and lighter particles greatly decreases the fertility of the soil.

Textural change. Water erosion makes sandy soils even sandier by moving the finest particles considerable distances and leaving the coarser particles close by. Medium- and fine-textured soils are usually well aggregated. Their textures are not altered seriously by erosion because the water sorts aggregates, not individual soil particles. Generally, small and large aggregates have similar textural compositions. Erosion may remove the entire surface horizon. The new surface soil, which is really the exposed subsoil, is generally finer textured. This makes seedbed preparation more difficult and poses problems at other stages of crop production.

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### 编辑推荐

《水资源工程学》面向具有中等英语水平的读者，目的是全面、系统地介绍水资源工程专业知识

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